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# **The Role of Foreign Technology in Chinese Naval Modernization (U)**

**Defense Research Reference Series**



**Defense Intelligence Agency**

**DDB-1200-331-86  
December 1986**

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# **The Role of Foreign Technology in Chinese Naval Modernization (U)**

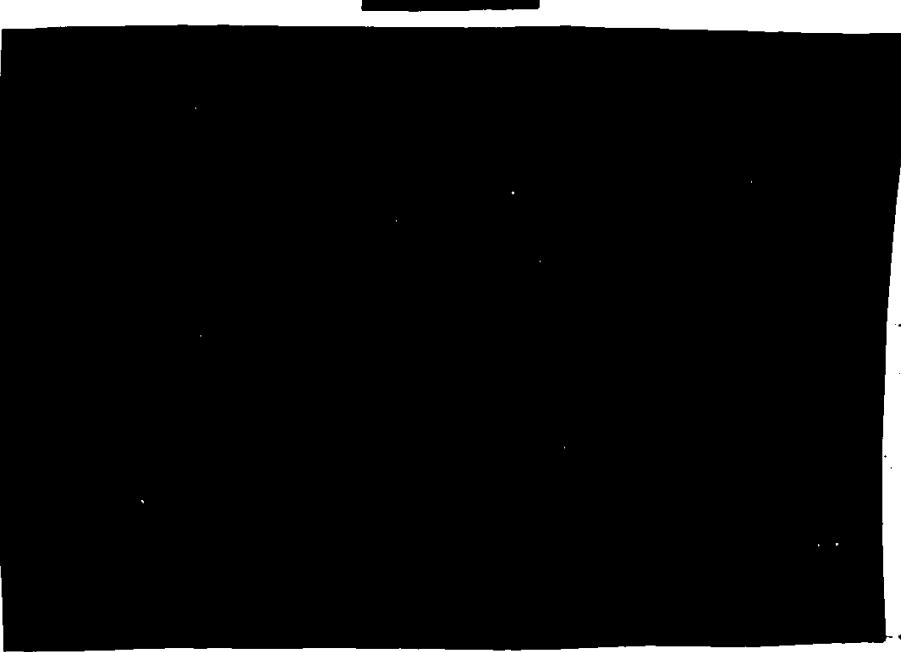
## Defense Research Reference Series

DDR-1200-331-86

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Directorate for Research,  
Defense Intelligence Agency

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(U) For the time being, except in rare cases where immediate needs cannot be deferred, the Navy's equipment modernization will take place only insofar as domestic industry and technology can perform it. In the past, the Chinese have alternately disdained foreign technology or seen it as a panacea. In their current Four Modernizations programs, the Chinese are pursuing a more pragmatic approach, seeking to integrate foreign technology into indigenous development. Nevertheless, it remains to be seen whether China can meet the demands that modern technology places on innovation, quality control, and resource allocation. There is often a dichotomy between China's emphasis on the principle of self-sufficiency, and the efficient and timely acquisition, by whatever means, of required technologies. When the two conflict, the principle of self-sufficiency predominates.



(U) China's present naval concerns reflect, among other things, response to changing threat perceptions (major external influences have included the Vietnam war, the withdrawal of Soviet assistance in 1960, and the Sino-Soviet border clashes in 1969). This threat perception shifted from the US to the USSR in the early 1960s and 1970s, as the USSR expanded its forces along the Sino-Soviet border and

<sup>1</sup>(U) Economics is probably the greatest factor given the problem of scale; the sheer numbers of equipment needed to modernize the force simply preclude outright purchase of the items required.

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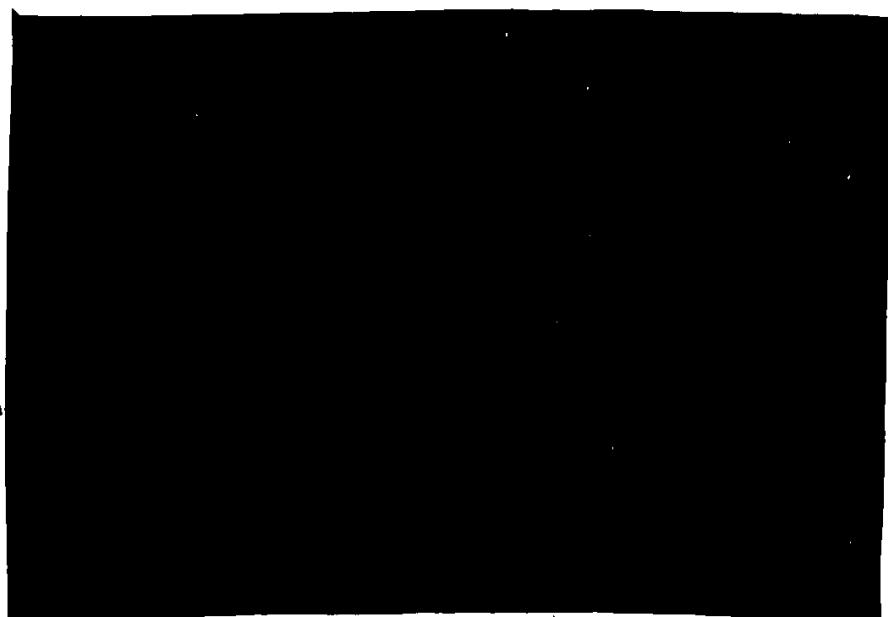
expanded its fleet in the Indian Ocean and South China Sea. Further expansion of the Soviet Pacific Fleet has provided additional impetus to China's naval modernization. However, Beijing continues to see the US as a decisive counterweight to Soviet naval forces. Hence, naval modernization moves at a deliberate pace.



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*Figure 1. (U) "One of the essential tasks of the building of Navy modernization at present is to seize the opportune moment of the period of peaceful construction to make big headway in navy equipment. The most important thing in Navy modernization is the modernization of its arms. The key to the modernization of arms lies in the military scientific research. Therefore, it is particularly necessary to strengthen demonstration work. Commencing with the seventh five-year plan, we must try to demonstrate a new generation of arms and make preparations for manufacturing in the eighth five-year plan so as to make considerable headway in the modernization of navy equipment by the end of the 1990s." — Liu Huqing, Commander, PLA Navy, January 1986.*



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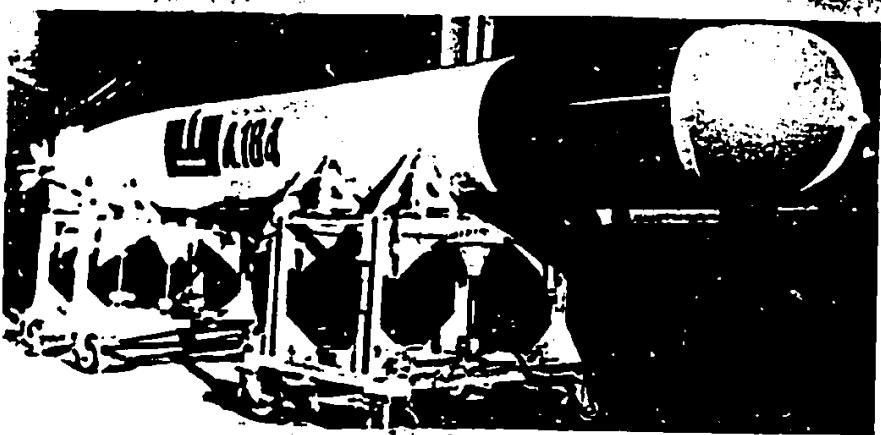
*Figure 2. (U) PLA Navy Personnel. PRC Navy Commander in Chief Liu Huaqing listed five requirements for personnel needed for Navy building: 1) have lofty revolutionary ideals and the spirit of dedication to maritime undertakings; 2) be brave, selfless, and tenacious, and do things in a scientific and realistic way; 3) have fairly broad knowledges of science, technology, and culture and well as rich practical experiences at sea; 4) have a strong sense of organization and discipline and the ability to deal with emergency situations flexibly and independently; and 5) have a strong physique*



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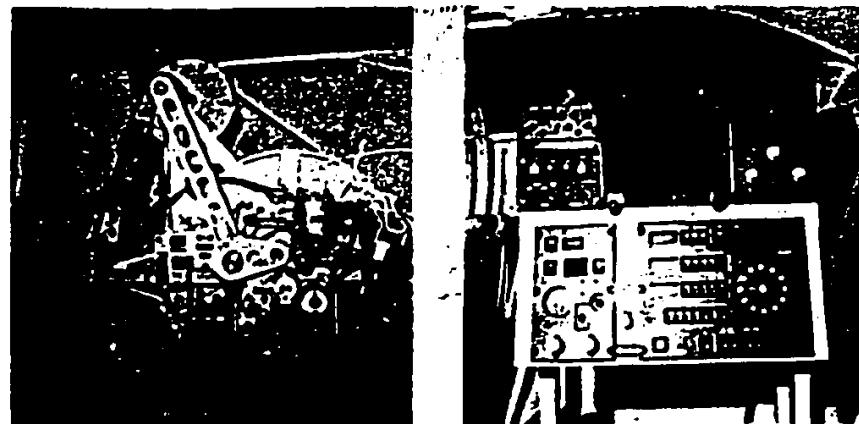


4.1 The current system in use with the US Navy is the AN/ASQ-11. This consists of the STU-5, which is  
replaced by the AN/ASQ-18 currently in use with the West German Air Force.

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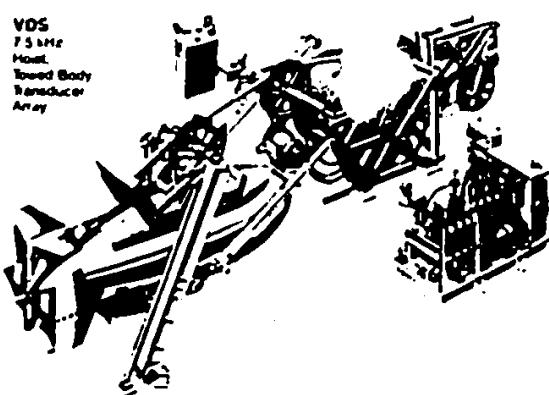
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DE1167LF  
7.5 MHz

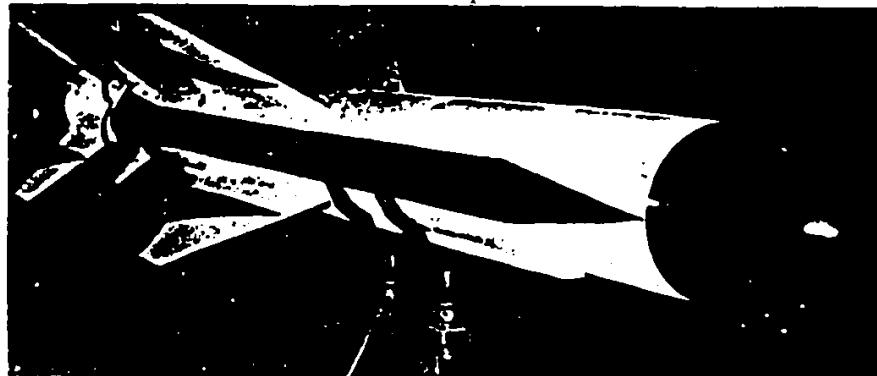
Receiver  
(R12 MM)  
VDS  
Selected  
Beam  
Control  
System

7.5 MHz Stainless  
Steel Dome  
and  
Transducer  
Array

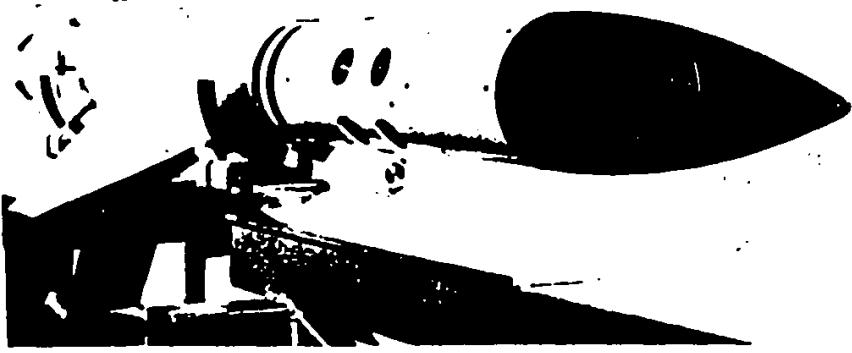
VDS  
7.5 MHz  
Mount  
Bread Board  
Transducer  
Array



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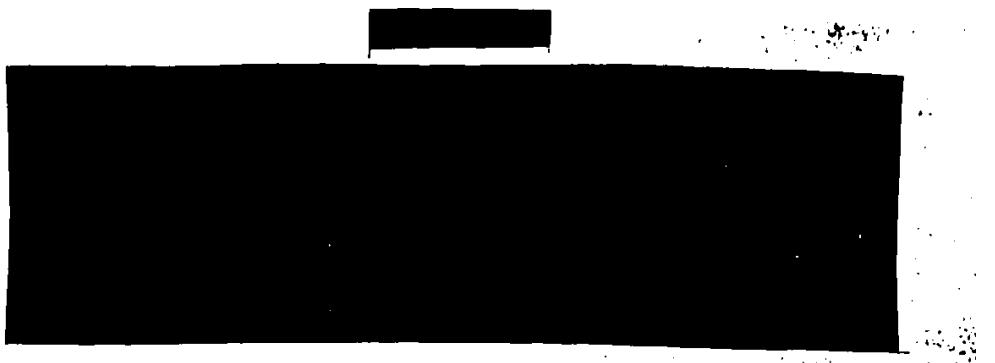


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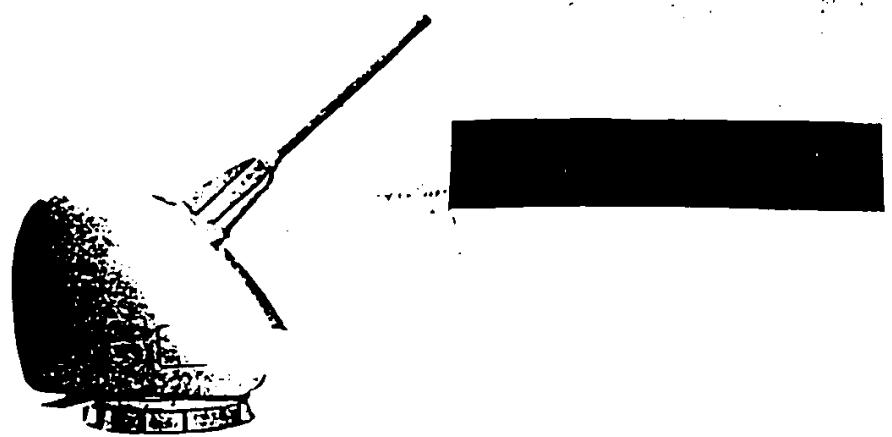


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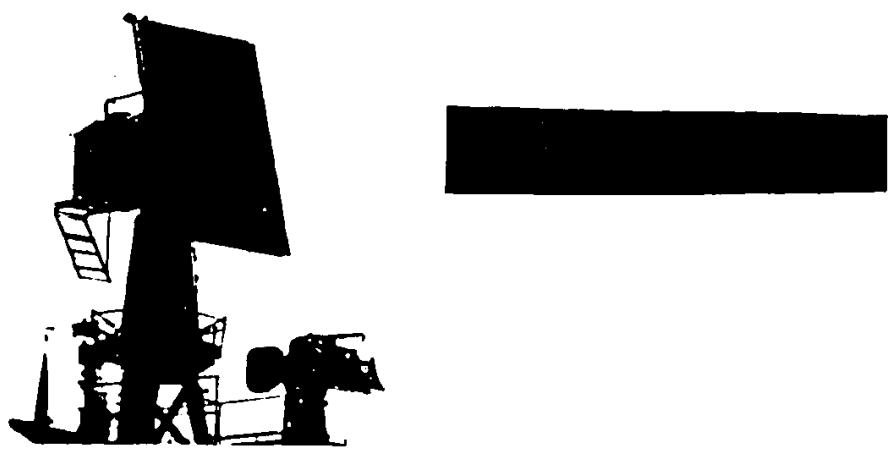




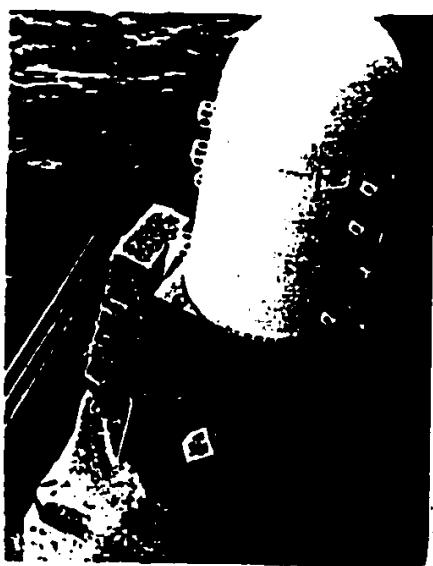
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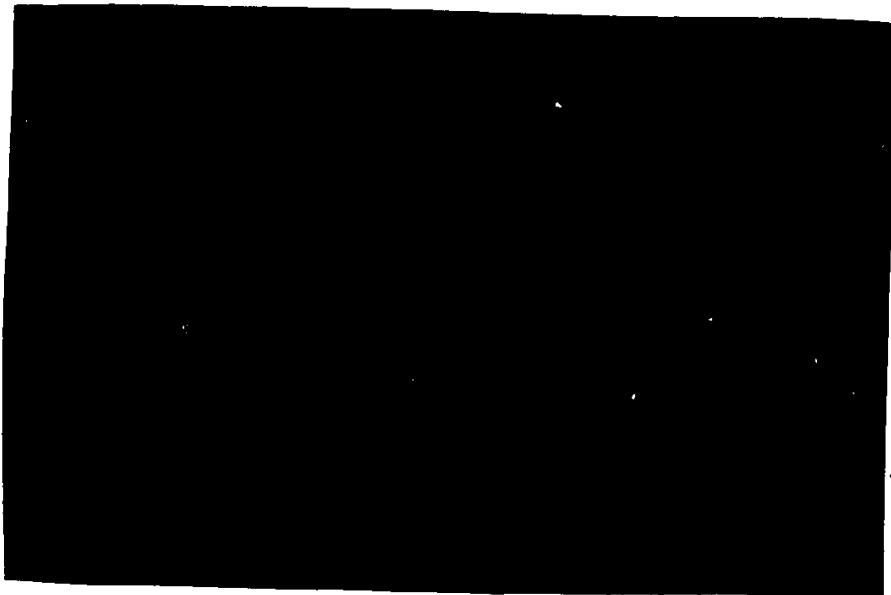
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e. Command, Control, and Communications (C<sup>3</sup>) and  
Electronic Warfare (EW)

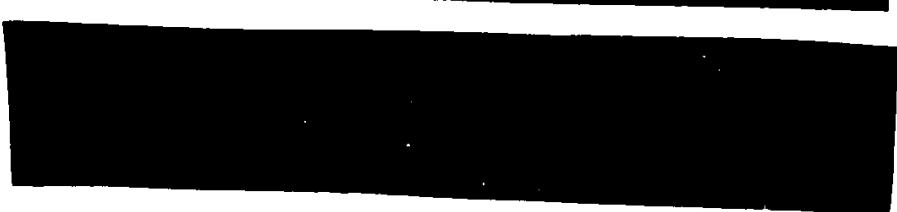
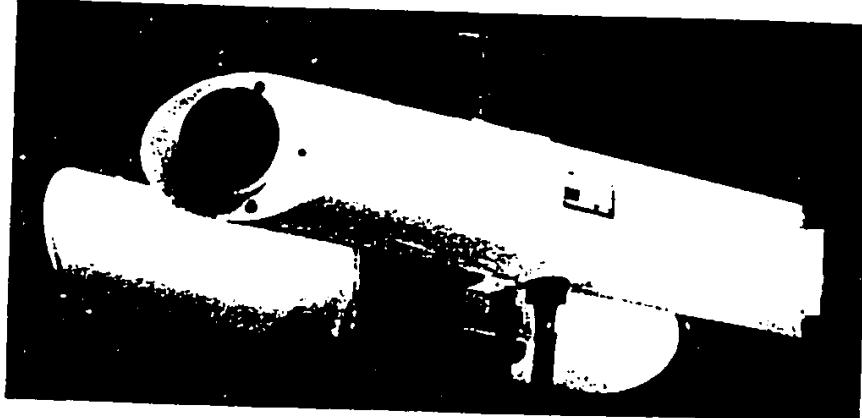
(U) The Chinese Navy is also actively developing its naval command and control and automated systems. The most significant technology transfer of this sort to date is a contract signed with Marconi of the UK in November 1984 for an undetermined number of NTC-2 radio communications control systems enhanced by a SEAFON<sup>®</sup> communications and intercom control system for their major

(U) SEAFON coordinates command and control communications with ship fighting systems.

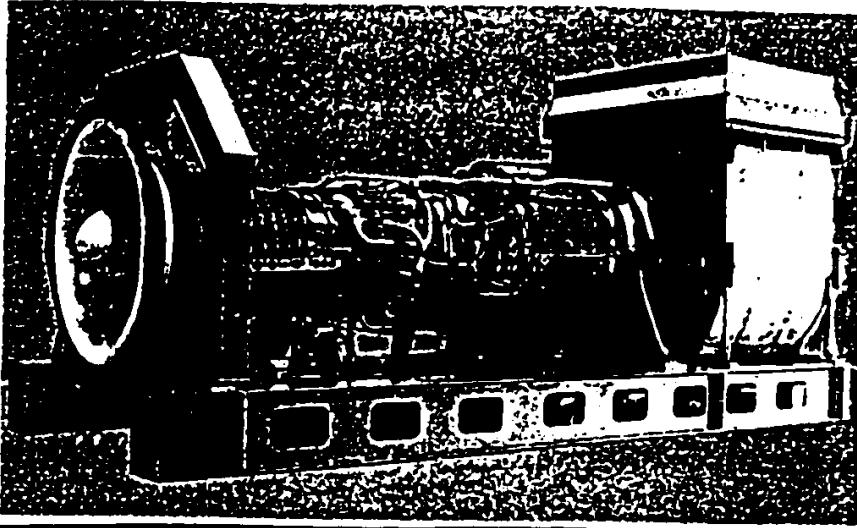
combatants. The NTC-2 is primarily designed for small navies; however, it would improve Chinese communication technology (including intra- and intership tactical communications).<sup>7</sup>



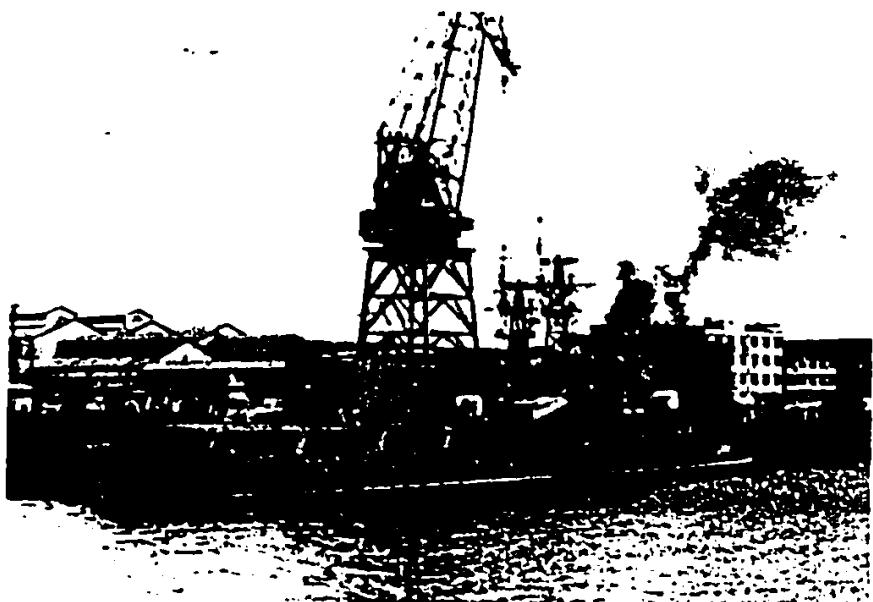
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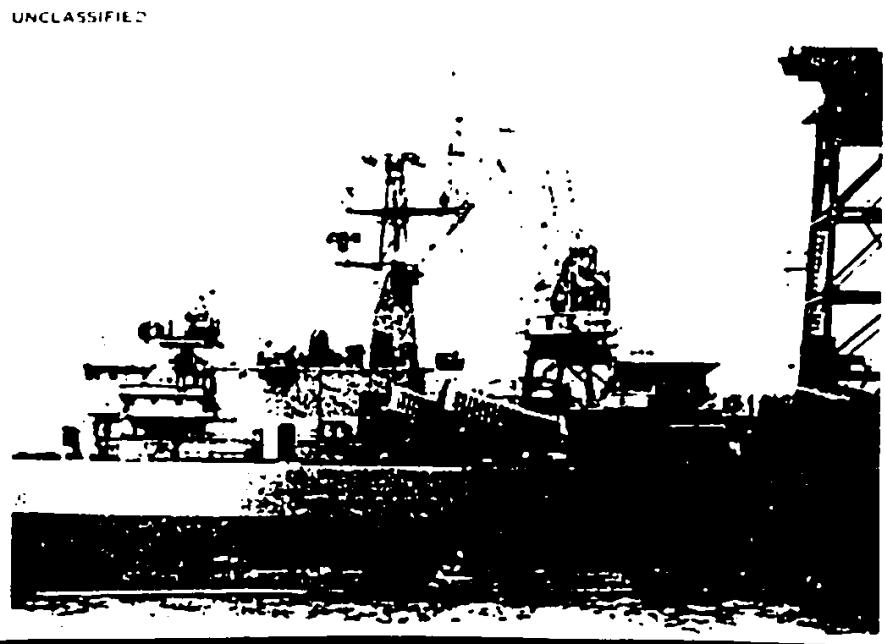
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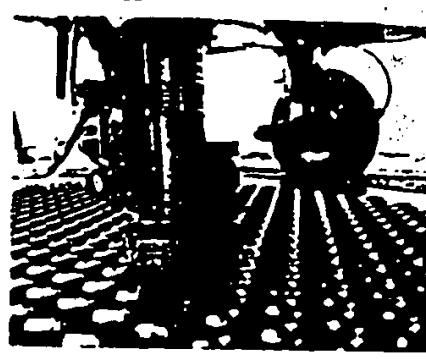
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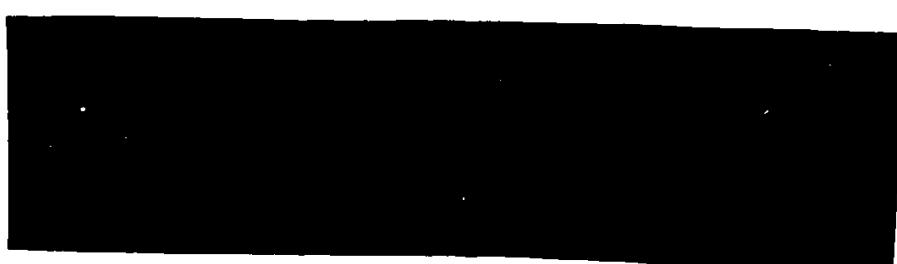
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6. CONCLUSION



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## **Appendix B**

### **Glossary of Naval Ship Types (U)**

DD	Destroyer
FF	Frigate
PC	Patrol Craft
PTG	Missile Attack Boat
SS	Attack Submarine
SSB	Ballistic Missile Submarine
SSG	Guided Missile Submarine
SSN	Nuclear-Powered Attack Submarine

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